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TECH CENTER 1600/2900



11009

1600

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/423,035B

DATE: 01/31/2003  
TIME: 15:59:40

Input Set : A:\463.4.TXT  
Output Set: N:\CRF4\01312003\I423035B.raw

4 <110> APPLICANT: Joyce, Gerald F.  
5 Breaker, Ronald R.  
7 <120> TITLE OF INVENTION: ENZYMATIC DNA MOLECULES  
10 <130> FILE REFERENCE: TSRI 463\_4  
12 <140> CURRENT APPLICATION NUMBER: US 09/423,035B  
13 <141> CURRENT FILING DATE: 2000-01-13  
15 <150> PRIOR APPLICATION NUMBER: PCT/US98/08677  
16 <151> PRIOR FILING DATE: 1998-04-29  
18 <150> PRIOR APPLICATION NUMBER: US 60/045,228  
19 <151> PRIOR FILING DATE: 1997-04-29  
21 <160> NUMBER OF SEQ ID NOS: 150  
23 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
25 <210> SEQ ID NO: 1  
26 <211> LENGTH: 15  
27 <212> TYPE: DNA  
28 <213> ORGANISM: Artificial Sequence  
30 <220> FEATURE:  
31 <223> OTHER INFORMATION: Synthesized  
33 <400> SEQUENCE: 1  
34 cggtaagctt ggcac 15  
36 <210> SEQ ID NO: 2  
37 <211> LENGTH: 19  
38 <212> TYPE: DNA  
39 <213> ORGANISM: Artificial Sequence  
41 <220> FEATURE:  
42 <223> OTHER INFORMATION: Synthesized  
W--> 44 <221> NAME/KEY: misc\_feature  
45 <222> LOCATION: 8  
46 <223> OTHER INFORMATION: N = Adenosine Ribonucleotide  
W--> 48 <400> 2  
W--> 49 tcactatngg aagagatgg 19  
51 <210> SEQ ID NO: 3  
52 <211> LENGTH: 38  
53 <212> TYPE: DNA  
54 <213> ORGANISM: Artificial Sequence  
56 <220> FEATURE:  
57 <223> OTHER INFORMATION: Synthesized  
59 <400> SEQUENCE: 3  
60 acacatctct gaagttagcgc cgccgtatag tgacgcta 38  
62 <210> SEQ ID NO: 4  
63 <211> LENGTH: 80  
64 <212> TYPE: DNA  
65 <213> ORGANISM: Artificial Sequence

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67 <220> FEATURE:  
68 <223> OTHER INFORMATION: Synthesized  
W--> 70 <221> NAME/KEY: misc\_feature  
71 <222> LOCATION: (16)...(65)  
72 <223> OTHER INFORMATION: n = a, g, t, or c  
W--> 74 <400> 4  
W--> 75 gtgccaagct taccgnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60  
W--> 76 nnnnngtcgc catctttcc 80  
78 <210> SEQ ID NO: 5  
79 <211> LENGTH: 28  
80 <212> TYPE: DNA  
81 <213> ORGANISM: Artificial Sequence  
83 <220> FEATURE:  
84 <223> OTHER INFORMATION: Synthesized  
W--> 86 <221> NAME/KEY: misc\_feature  
87 <222> LOCATION: 28  
88 <223> OTHER INFORMATION: N = Adenosine Ribonucleotide  
W--> 90 <221> misc\_feature  
91 <222> LOCATION: 28  
92 <223> OTHER INFORMATION: 2' 3' cyclic phosphate  
W--> 94 <400> 5  
W--> 95 gggacgaatt ctaatacgac tcactatn 28  
97 <210> SEQ ID NO: 6  
98 <211> LENGTH: 28  
99 <212> TYPE: DNA  
100 <213> ORGANISM: Artificial Sequence  
102 <220> FEATURE:  
103 <223> OTHER INFORMATION: Synthesized  
W--> 105 <221> NAME/KEY: misc\_feature  
106 <222> LOCATION: 28  
107 <223> OTHER INFORMATION: N = Adenosine Ribonucleotide  
W--> 109 <221> misc\_feature  
110 <222> LOCATION: 1  
111 <223> OTHER INFORMATION: Optional 5 prime biotinylation  
W--> 113 <400> 6  
W--> 114 gggacgaatt ctaatacgac tcactatn 28  
116 <210> SEQ ID NO: 7  
117 <211> LENGTH: 19  
118 <212> TYPE: DNA  
119 <213> ORGANISM: Artificial Sequence  
121 <220> FEATURE:  
122 <223> OTHER INFORMATION: Synthesized  
W--> 124 <221> NAME/KEY: misc\_feature  
125 <222> LOCATION: 8  
126 <223> OTHER INFORMATION: N = Adenosine Ribonucleotide  
W--> 128 <400> 7  
W--> 129 tcactatngg aagagatgg 19  
131 <210> SEQ ID NO: 8  
132 <211> LENGTH: 8

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133 <212> TYPE: DNA  
134 <213> ORGANISM: Artificial Sequence  
136 <220> FEATURE:  
137 <223> OTHER INFORMATION: Synthesized  
W--> 139 <221> NAME/KEY: misc\_feature  
140 <222> LOCATION: 8  
141 <223> OTHER INFORMATION: N = Adenosine Ribonucleotide  
W--> 143 <400> 8  
W--> 144 tcactatn 8  
146 <210> SEQ ID NO: 9  
147 <211> LENGTH: 30  
148 <212> TYPE: DNA  
149 <213> ORGANISM: Artificial Sequence  
151 <220> FEATURE:  
152 <223> OTHER INFORMATION: Synthesized  
154 <400> SEQUENCE: 9  
155 ccatctttc ctatagttag tccggctgca 30  
157 <210> SEQ ID NO: 10  
158 <211> LENGTH: 15  
159 <212> TYPE: DNA  
160 <213> ORGANISM: Artificial Sequence  
162 <220> FEATURE:  
163 <223> OTHER INFORMATION: Synthesized  
165 <400> SEQUENCE: 10  
166 gtgccaagct taccg 15  
168 <210> SEQ ID NO: 11  
169 <211> LENGTH: 43  
170 <212> TYPE: DNA  
171 <213> ORGANISM: Artificial Sequence  
173 <220> FEATURE:  
174 <223> OTHER INFORMATION: Synthesized  
176 <400> SEQUENCE: 11  
177 ctgcagaatt ctaatacgac tcactatagg aagagatggc gac 43  
179 <210> SEQ ID NO: 12  
180 <211> LENGTH: 19  
181 <212> TYPE: DNA  
182 <213> ORGANISM: Artificial Sequence  
184 <220> FEATURE:  
185 <223> OTHER INFORMATION: Synthesized  
W--> 187 <221> NAME/KEY: misc\_feature  
188 <222> LOCATION: 8  
189 <223> OTHER INFORMATION: N = Adenosine Ribonucleotide  
W--> 191 <400> 12  
W--> 192 tcactatngg aagagatgg 19  
194 <210> SEQ ID NO: 13  
195 <211> LENGTH: 43  
196 <212> TYPE: DNA  
197 <213> ORGANISM: Artificial Sequence  
199 <220> FEATURE:

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200 <223> OTHER INFORMATION: Synthesized  
**W--> 202 <221> NAME/KEY: misc\_feature**  
 203 <222> LOCATION: 28  
 204 <223> OTHER INFORMATION: N = Adenosine Ribonucleotide  
**W--> 206 <400> 13**  
**W--> 207 gggacgaatt ctaatacgac tcactatngg aagagatggc gac** 43  
 209 <210> SEQ ID NO: 14  
 210 <211> LENGTH: 50  
 211 <212> TYPE: DNA  
 212 <213> ORGANISM: Artificial Sequence  
 214 <220> FEATURE:  
 215 <223> OTHER INFORMATION: Synthesized  
 217 <400> SEQUENCE: 14  
 218 tcacacatct ctgaagtagc gccggcgat gtgacgctag gggttcgcct 50  
 220 <210> SEQ ID NO: 15  
 221 <211> LENGTH: 50  
 222 <212> TYPE: DNA  
 223 <213> ORGANISM: Artificial Sequence  
 225 <220> FEATURE:  
 226 <223> OTHER INFORMATION: Synthesized  
 228 <400> SEQUENCE: 15  
 229 ggggggaacg ccgtaacaag ctctgaacta gcgggttgcga tatagtcgta 50  
 231 <210> SEQ ID NO: 16  
 232 <211> LENGTH: 50  
 233 <212> TYPE: DNA  
 234 <213> ORGANISM: Artificial Sequence  
 236 <220> FEATURE:  
 237 <223> OTHER INFORMATION: Synthesized  
 239 <400> SEQUENCE: 16  
 240 cgggactccg tagccattg cttttgcag cgtcaacgaa tagcgtattta 50  
 242 <210> SEQ ID NO: 17  
 243 <211> LENGTH: 50  
 244 <212> TYPE: DNA  
 245 <213> ORGANISM: Artificial Sequence  
 247 <220> FEATURE:  
 248 <223> OTHER INFORMATION: Synthesized  
 250 <400> SEQUENCE: 17  
 251 ccaccatgtc ttctcgagcc gaaccgatacg ttacgtcata cctcccgat 50  
 253 <210> SEQ ID NO: 18  
 254 <211> LENGTH: 50  
 255 <212> TYPE: DNA  
 256 <213> ORGANISM: Artificial Sequence  
 258 <220> FEATURE:  
 259 <223> OTHER INFORMATION: Synthesized  
 261 <400> SEQUENCE: 18  
 262 gccagattgc tgctaccaggc ggtacgaaat agtgaagtgt tcgtgactat 50  
 264 <210> SEQ ID NO: 19  
 265 <211> LENGTH: 50  
 266 <212> TYPE: DNA

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Input Set : A:\463.4.TXT  
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267 <213> ORGANISM: Artificial Sequence  
269 <220> FEATURE:  
270 <223> OTHER INFORMATION: Synthesized  
272 <400> SEQUENCE: 19  
273 ataggccatg cttaggcgt taggtaccc gcccttatcg 50  
275 <210> SEQ ID NO: 20  
276 <211> LENGTH: 50  
277 <212> TYPE: DNA  
278 <213> ORGANISM: Artificial Sequence  
280 <220> FEATURE:  
281 <223> OTHER INFORMATION: Synthesized  
283 <400> SEQUENCE: 20  
284 tctgctctcc tctattctag cagtgcagcg aatatgtcg aatagtcggt 50  
286 <210> SEQ ID NO: 21  
287 <211> LENGTH: 50  
288 <212> TYPE: DNA  
289 <213> ORGANISM: Artificial Sequence  
291 <220> FEATURE:  
292 <223> OTHER INFORMATION: Synthesized  
294 <400> SEQUENCE: 21  
295 ttgcccagca tagtcggcag acgtgggtt agcgacacga taggcccgg 50  
297 <210> SEQ ID NO: 22  
298 <211> LENGTH: 50  
299 <212> TYPE: DNA  
300 <213> ORGANISM: Artificial Sequence  
302 <220> FEATURE:  
303 <223> OTHER INFORMATION: Synthesized  
305 <400> SEQUENCE: 22  
306 ttgcttagctc ggctgaactt ctgttagcgca accgaaatag tgaggcttga 50  
308 <210> SEQ ID NO: 23  
309 <211> LENGTH: 107  
310 <212> TYPE: DNA  
311 <213> ORGANISM: Artificial Sequence  
313 <220> FEATURE:  
314 <223> OTHER INFORMATION: Synthesized  
W--> 316 <221> NAME/KEY: misc\_difference  
317 <222> LOCATION: 28  
318 <223> OTHER INFORMATION: N = Adenosine Ribonucleotide  
W--> 320 <221> misc\_feature  
321 <222> LOCATION: (49)...(88)  
322 <223> OTHER INFORMATION: N = A, G, C, or T  
W--> 324 <400> 23  
W--> 325 gggacgaatt ctaatacgac tcactatngg aagagatggc gacatctcnn nnnnnnnnnnn 60  
W--> 326 nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnngt gacggtaagc ttggcac 107  
328 <210> SEQ ID NO: 24  
329 <211> LENGTH: 49  
330 <212> TYPE: DNA  
331 <213> ORGANISM: Artificial Sequence  
333 <220> FEATURE:

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/423,035B

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Input Set : A:\463.4.TXT  
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; N Pos. 8  
Seq#:4; N Pos. 16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35  
Seq#:4; N Pos. 36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55  
Seq#:4; N Pos. 56,57,58,59,60,61,62,63,64,65  
Seq#:5; N Pos. 28  
Seq#:6; N Pos. 28  
Seq#:7; N Pos. 8  
Seq#:8; N Pos. 8  
Seq#:12; N Pos. 8  
Seq#:13; N Pos. 28  
Seq#:23; N Pos. 28,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67  
Seq#:23; N Pos. 68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87  
Seq#:23; N Pos. 98  
Seq#:50; N Pos. 34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53  
Seq#:50; N Pos. 54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73  
Seq#:50; N Pos. 74,75,76,77,78,79,80,81,82,83  
Seq#:51; N Pos. 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54  
Seq#:51; N Pos. 55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74  
Seq#:51; N Pos. 75,76,77,78,79,80,81,82,83,84  
Seq#:123; N Pos. 18  
Seq#:128; N Pos. 22  
Seq#:133; N Pos. 8,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47  
Seq#:133; N Pos. 48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66  
Seq#:133; N Pos. 67,68  
Seq#:139; N Pos. 28  
Seq#:140; N Pos. 5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25  
Seq#:140; N Pos. 26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44  
Seq#:141; N Pos. 28  
Seq#:143; N Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22  
Seq#:143; N Pos. 23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40  
Seq#:146; N Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22  
Seq#:146; N Pos. 23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41  
Seq#:146; N Pos. 42,43,44,45,46,47,48,49,50